Western States Fear Major Workload Problems With Draft SO2 NAAQS Guide

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Western states are warning EPA that its draft guidance for implementing the agency's 1-hour sulfur dioxide (SO2) air standard will create major workload problems for states, likely increasing the number of areas found out of attainment with the limit and setting tight deadlines for states to submit plans on coming into attainment.

At a Nov. 1 meeting of the Western States Air Resources Council (WESTAR), Wyoming air official Tina Anderson gave a presentation warning that the agency's plans are "overly ambitious," requiring submission of state air quality plans for meeting the standard by mid-2013 -- even though the rule will create many first-time SO2 nonattainment areas that will have to do extensive modeling and other work to craft their plans for reaching attainment.

EPA in September issued draft guidance for how states should perform modeling and craft state implementation plans (SIPs) outlining how they intend to meet its stricter SO2 national ambient air quality standard (NAAQS). EPA in June 2010 tightened the standard to 75 parts per billion (ppb), using a new 1-hour averaging time. Previously EPA used an annual standard of 30 ppb and a 24-hour standard of 140 ppb.

Since issuing the standard, EPA has acknowledged that a lack of air quality monitors in rural areas means that the status of many areas remains unclear. Instead, EPA is designating areas "unclassifiable" while a new implementation approach based mainly on air quality modeling -- rather than monitoring -- is put in place.

Even with the uncertainties over states' attainment status, EPA's guidance requires that both unclassifiable and attainment areas write SIPs to either bring them into attainment or prevent them falling into nonattainment, with extensive modeling required. These SIPs previously did not require such modeling.

Traditionally states are presumed in attainment and use modeling to determine where to place monitors to detect potential NAAQS violations, with possible changes in attainment status based on that data. Under the SO2 standard and guidance, a Western state source says, states will have to for the first time "prove a negative" because they will have to draft SIPs for unclassifiable areas immediately.

The SIPs for unclassifiable areas will seek to ensure their compliance with the NAAQS, using conservative modeling that will likely show higher pollutant levels than monitoring would, the source says.

EPA signaled the switch to a modeling-led approach in a separate March 24 guidance document, then followed up with a draft SO2 implementation guidance Sept. 23.

The agency's approach puts pressure on states to prove they do not have a nonattainment problem in a given area, greatly adding to their workload and the likelihood that more nonattainment areas will emerge than would have been the case under the previous approach, the source says. "We are concerned we are never going to be able to determine through this approach whether we are [in] attainment or nonattainment," the source says. Under the Clean Air Act, nonattainment areas have to impose more stringent pollution controls on industry.

The source argues that there could be many theoretical nonattainment areas identified as a result of the EPA-mandated modeling, which assumes worst-case scenarios for SO2 emissions from stationary sources such as power plants, but that many of these sources will not be running at full capacity in the least favorable weather conditions as the model assumes, and hence many areas may needlessly be labeled nonattainment.

Modeling Requirements

EPA shifted its requirements from monitoring to mainly modeling when it became clear that a stricter standard with a short averaging time would require many more monitors than are available, especially in rural areas of the country

that have previously had no need of them. Given the poor economy and dwindling state and federal budgets, EPA is trying to minimize monitoring costs for states by shifting toward more modeling.

The new approach, however, has angered some states who argue that EPA's conservative modeling assumptions could lead to areas being classified in nonattainment for the first time -- with the nonattainment designations bringing with them the requirement to impose strict, potentially costly, pollution limits on industry.

These states are suing EPA to block the NAAQS in the case *Montana Sulphur & Chemical Company v. EPA*, in which they criticize EPA's AERMOD emissions model as flawed. They claim the model uses unrealistically conservative assumptions about emissions rates and weather, producing excessively high modeled emissions.

In the presentation at its fall business meeting Nov. 1, Anderson from WESTAR's planning committee outlined the misgivings of its member states with EPA's modeling approach for the SO2 NAAQS.

The presentation notes EPA's "overly ambitious" implementation strategy, in terms of both timing and scope, as defined by the final NAAQS and the implementation guide. EPA will require both "infrastructure" and "maintenance" SIPs from states by June 2013. Infrastructure SIPs include the overarching structure of a state's air quality program.

"States with large SO2 sources may have many new nonattainment areas that aren't violating at the monitor. AERMOD will show violations in areas with variable terrain," the presentation says. Anderson's presentation says it is "Not clear who will do all this modeling."

EPA recently extended the comment period on the SO2 guidance through Dec. 2, and WESTAR's presentation says the group will likely ask in its comments for a "more balanced hybrid approach" that would rely more on monitoring, and less on modeling. WESTAR's planning committee recommends asking EPA to keep attainment and nonattainment schedules and requirements separate. EPA extended the comment deadline for the draft guidance by 30 days following requests from states and others, who said they needed more time to parse the complex document.

Demonstrating Compliance

At the WESTAR meeting, Michael Ling of EPA's Office of Air Quality Planning and Standards gave a presentation saying that EPA expects unclassifiable areas to attain the NAAQS by Aug. 2017, using air quality dispersion modeling to demonstrate compliance. Ling defends EPA's use of a 100 tons per year threshold to determine which SO2 source require modeling, which he says will narrow the number of sources to be modeled, while capturing 99 percent of SO2 emissions in modeling.

Ling says that EPA is also working on a separate rule on key issues from the SO2 guidance document, which would: codify the technical approach for determining the compliance with the 1-hour SO2 NAAQS; establish compliance deadlines for attainment and maintenance SIPs; establish regulations for the elements that should be included in these SIPs; and establish criteria for how areas designated as unclassifiable can be redesignated to attainment.

Ling further says that states' participation in other EPA programs, such as the Cross-State Air Pollution Rule cap-and-trade program for power plants and a boiler maximum achievable control technology air toxic rule -- stalled while EPA reconsiders it -- are "expected to result in the installation of controls at many of the largest SO2 sources to meet emissions limits that will help to ensure attainment and maintenance of the 1-hour SO2 NAAQS."

States will be allowed to include these controls into their SIPs for SO2, but "states will need to adopt emissions limits to be consistent with the form of the 1-hour SO2 NAAQS," Ling said in his presentation, adding that EPA will respond to comments and issue a final guidance as soon as possible afterward. -- *Stuart Parker*